

**Colorado Department of Transportation**  
**Structure Inspection and Inventory Report (English Units)**

Highway Number (ON) 5D: 470A 1

Mile Post (ON)11: 25.053 mi

Bridge Key: F-17-IC

Inspection Date: 12/14/2011

Sufficiency Rating: 70.0 Not Eligible

Rgn/Sectn 2E/2M: 68  
 Trans Region 2T: 02  
 County Code 3: 035  
 DOUGLAS  
 Place Code 4: 00000  
 non-city  
 Rte.(On/Under)5A: 1  
 Signing Prefix 5B: 3  
 Level of Service 5C: 1  
 Directional Suffix 5E: 0  
 Feature Intersected 6:  
 WILLOW CREEK  
 Facility Carried 7:  
 SH 470 ML  
 Alias Str No.8A:  
 Prll Str No. 8P  
 Location 9: 328.05117409  
 1.5 MI W OF JCT I 25  
 Max Clr 10: 99.99  
 BaseHiway Net12: 1  
 IrsinvRout 13A: 000000470A  
 IrsSubRout No13B: 00  
 Latitude 16: 39d 33' 47"  
 Longitude 17: 104d 53' 16"  
 Range18A: 67 W  
 Township18B: 67  
 Section18C: 4  
 Detour Length 19: 2.0 mi  
 Toll Facility 20: 3  
 Custodian 21: 1  
 Owner 22: 1  
 Functional Class 26: 12  
 Year Built 27: 1984  
 Lanes on 28A: 6  
 Lanes Under 28B: 0  
 ADT 29: 107,000  
 Year of ADT 30: 2008  
 Design Load 31: 6  
 Apr Rdwy Width 32: 76.0 ft  
 Median 33: 2  
 Skew 34: 40.00 °  
 Structure Flared 35: 0  
 Sfty Rail 36a/b/c/d: 1 1 1 1  
 Rail ht36h: 27 "in"

Hist Signif 37: 5  
 Posting status 41: A  
 Service on/un 42A/B: 1 5  
 Main Mat/Desgn 43A/B: 1 19  
 Appr Mat/Desgn 44A/B: 0 0  
 Main Spans Unit 45: 3  
 Approach Spans 46: 0  
 Horiz Clr 47: 38.0 ft  
 Max Span 48: 15.7 ft  
 Str Length 49: 49.0 ft  
 Curb Wdth L/R 50A/B: 0.0 ft 0.0 ft  
 Width Curb to Curb 51: 0.0 ft  
 Width Out to Out 52: 228.3 ft  
 Deck Area: 11,420.5 sq. ft  
 Min Clr Ovr Brdg 53: 99.99  
 Min Undrclr Ref 54A: N  
 Min Undrclr 54B: 0.0 ft  
 Min Lat Clmce Ref R 55A: N  
 Min Lat Undrclr R 55B: 0.0 ft  
 Min Lat Undrclr L 56: 0  
 Deck 58: N  
 Super 59: N  
 Sub 60: N  
 Channel/Protection 61: 8  
 Culvert 62: 6  
 Oprtng Rtg Method 63: 5 No rating  
 Operating Rating 64: 36.0  
 Inv Rtg Method 65: 5  
 Inventory Rating 66: 36.0  
 Asph/Fill Thick 66T: 120 "in"  
 Str. Evaluation 67: 6  
 Deck Geometry 68: N  
 Undrclr Vert/Hor 69: N  
 Posting 70: 5  
 Waterway Adequacy 7: 9  
 Approach Alignment 72: 8  
 Type of Work 75A:  
 Work Done By 75B:  
 Length of Improvment 76: 0.0 ft  
 Insp Team Indicator 90B: RED TEAM  
 Inspector Name 90C: RUTHERFORDI  
 Frequency 91: 24 months  
 FC Frequency 92A: -1  
 UW Frequency 92B: -1  
 SI Frequency 92C: -1  
 FC Inspection Date 93A:

UW Inspection Date 93B:  
 SI Date 93C:  
 Bridge Cost 94: \$ 0  
 Roadway Cost 95: \$ 0  
 Total Cost 96: \$ 0  
 Year of Cost Estimate 97:  
 Brdr Brdg Code/% 98A/B:  
 Border Bridge Number 99:  
 Defense Highway 100: 0  
 Parallel Structure 101: N  
 Direction of Traffic 102: 2  
 Temporary Structure 103:  
 Highway System 104: 1  
 Fed Lands Hiway 105: 0  
 Year Reconstructed 106: 0000  
 Deck Type 107: N  
 Wearing Surface 108A: N  
 Membrane 108B: N  
 Deck Protection 108C: N  
 Truck ADT 109: 5 %  
 Trk Net 110: 1  
 Pier Protection 111: #  
 NBIS Length 112: Y  
 Scour Critical 113: 8  
 Scour Watch 113M: 0  
 Future ADT 114: 162,640  
 Year of Future ADT 115: 2028  
 CDOT Str Type 120A: CBC  
 CDOT Constr Type 120B: 0.  
 Inspection Indic 122A:  
 Inspection Trip 122AA:  
 Scheduling Status 122B:  
 Maintenance Patrol 123: 30  
 Expansion Dev/Type124:  
 Brdg Rail Type/Mod 125A/B:  
 Posting Trucks 129A/B/C: 0 0 0  
 Str Rating Date 130: 1/1/1901  
 Special Equip 133: -1  
 Vert Clr N/E 134A/B/C: X 99.99 0.00  
 Vert Clr S/W 135A/B/C: X 99.99 0.00  
 Vertical Clr Date: 1/1/1901  
 Weight Limit Color: 139: 0  
 Str Billing Type: U  
 Userkey 1 - System: ONSYS  
 Userkey 7-Update Indic:

Inspector Name: RUTHERFORDD

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**Element Inspection Report**

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
241/4	Concrete Culvert	(LF)	894	86 %	769	11 %	98	3 %	27	0 %	0	0 %	0
327/4	Culvert Wingwalls	(EA)	2	0 %	0	100 %	2	0 %	0	0 %	0	0 %	0
335/4	Culvert Headwalls	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
501/4	Channel Cond	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
502/4	ChannProtMatCond	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
504/4	BankCond	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
241/4	Concrete Culvert	Some longit. cracks with active leakage, efflorescence, rust stains, and stalactites in top slab of all cells. Several 1/16 inch wide longitudinal cracks without efflorescence in top slab. Light trans. crack with efflor. at the right end of Cell #2 in the top slab extends 15 ft. (PHOTO 1/08), and another extends 50 ft. near midspan. Some light vert. cracks in Walls 2 & 3. Mod. efflor. at top of Walls 2 (PHOTO 1/08), 3, and 4 due to seepage.
327/4	Culvert Wingwalls	Does not include retaining walls at left side which are included in off-system inspection. Flared wingwalls at the right side. #4 Right wingwall pushed 3.5 inches and joint is open 2 inches. #1 Right wing pushed 3.5 inches at top. Typical vertical cracks with efflorescence.
335/4	Culvert Headwalls	Some light vert. cracks with efflor. in right headwall, and few vert. cracks without efflor. in left headwall.
501/4	Channel Cond	Willow Creek. Good alignment. Well defined channel. Some cutting. Lined with grass and weeds. Flows mostly through Cell #2 at this time. Rock riprap (1 ft. diam.) placed in channel at inlet to Cell #2.
502/4	ChannProtMatCond	Large diam. rock riprap behind both wings at right side. Up to 4 ft. diam. rock has been placed between channel and bike path on upstream side.
504/4	BankCond	Steep, dirt with grass and some trees. Somewhat erodeable.

**Bridge Notes**

156 Feet of culvert (below E. Parkway Dr.) is inspected as OFF-SYSTEM. (DOUGLAS COUNTY Structure = Lone Tree - 1.) CDOT inspects portion from elbow joint to inlet. (298 feet).  
 Cracks at cold jt. between retaining walls at lt. side and CBC.

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**Inspection Notes**

Time: 11:45	Temperature: 40 Degrees	Weather: Clear	Team Leader: TAT
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**Scope:**

☒ NBI: ☒ Element: ☐ Underwater: ☐ Fracture Critical: ☐ Other: Type: Regular NBI

Inspector: RUTHERFORDD

Inspection Team:

Inspection Date: 12/14/2011

\_\_\_\_\_  
Inspector

\_\_\_\_\_  
Inspector